

*III-1b ____C ____NC

Chemistry 251
Worksheet 8

Name: _____

A. (1.0 pts.) Draw a stereorepresentation for each of the following compounds.

1. (S)-2-bromobutane
2. (R)-1,2-propanediol

B. (1.0 pts.) One of the following compounds has a stereocenter. Circle that molecule and draw stereorepresentations for the enantiomers and label as R or S.

1. 1-chloropentane
2. 2-chloropentane
3. 3-chloropentane

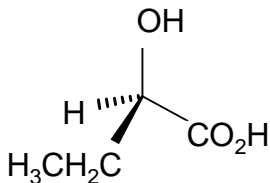
C. (1.0 pts.) Arrange each of the following sets of groups in order of decreasing priority.

1. $-\text{F}$, $-\text{Cl}$, $-\text{CH}=\text{O}$, $-\text{CH}_2\text{OH}$
2. $-\text{OH}$, CH_2OH , $-\text{CH}=\text{CHOH}$, $-\text{CH}_2\text{CH}_2\text{OH}$

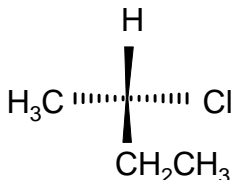
D. (1.0 pts.) Draw a stereorepresentation for (R)-2-butanol and convert your drawing to a Fischer projection.

E. (1.0 pts.) Convert each of the following three-dimensional drawings to a Fischer projection with the carbon chain vertical. Label each drawing as R or S.

1.

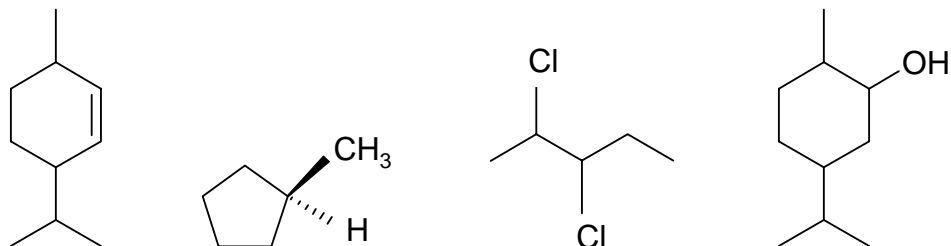


2.



F. (1.0 pts.) The concentration of an enantiomer dissolved in ethanol is 2.50g per 100mL of solution. Calculate the specific rotation of this enantiomer if a portion of this solution in a 1.00dm polarimeter tube causes an observed rotation of $+2.38^\circ$.

G. (2.0 pts.) Circle each stereocenter in each of the following molecules. Give the number of stereoisomers possible for each molecule.



H. (2.0 pts.) For each of the following compounds, draw Fischer projections for all the stereoisomers and label pairs of enantiomers and meso compounds.

1. 1,2,3,4-tetrachlorobutane

2. 2,3-dichloropentane